

**TECHNICAL SUPPORT FOR THE
CENTER FOR ENTERPRISE INTEGRATION**

**DELIVERY ORDER FOR
GCCS DATABASE MIGRATION**

**NPG USERS' MANUAL
13 MARCH 1996**

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SECTION 1 - SCOPE

1.1 IDENTIFICATION

The purpose of the Non-unit Personnel Generator (NPG) Users' Manual is to help the user generate Personnel Increment Numbers (PINs) using the NPG application. This manual was developed for the Global Command and Control System (GCCS) Database Migration under Contract Number DCA100-94-D-0016.

1.2 SYSTEM OVERVIEW

NPG offers an automated capability to generate Time-Phased Force and Deployment Data (TPFDD) files for the movement of non-unit replacement personnel. Non-unit personnel are required as replacements for all casualties, such as killed in action, taken prisoner of war, missing in action, and administratively lost. Generally, the replacement is needed in the theater when the casualty occurs; NPG determines the simulated loss and identifies the replacement. There are service variants of this guideline that NPG must consider. For example, Army and Air Force planners consider the loss of personnel to occur on the day they are evacuated from the combat zone. The Navy, however, incorporates a ten day slack period before NPG generates replacement personnel.

NPG is designed to operate on the hardware provided under the GCCS initiative. It was developed using Gain Momentum, Sybase's object-oriented development environment, which is part of the Government's Common Operating Environment (COE). NPG accesses Medical Planning and Execution System (MEPES) data in the MEPES database and stores its own data in NPG tables in the GCCS Core Database.

NPG requires two segments to be present on the GCCS Database Server: the GCCS Database Segment and the MEPES Database Segment. The GCCS Core Database contains the Operation Plans (OPLANs) that NPG may need to update, and the MEPES database tables contain the Medical Working Files (MWFs) from which NPG gets most of its input data.

1.3 DOCUMENT OVERVIEW

This manual provides the user with information about how each function within NPG works and how to use each one. It provides descriptions of each of the capabilities, and, where appropriate, information about how NPG calculates its data. This manual also provides step-by-step instructions on how to perform each function within NPG.

This document conforms to the format of DI-MCCR-80019A as contained within DOD-STD-2167A.

- Section 1 contains the system overview.
- Section 2 identifies documents referenced.
- Section 3 provides instructions for operating NPG.
- Section 4 describes error messages and their meanings.
- Section 5 lists the terms, abbreviations, and acronyms used within this document.

1.4 CONVENTIONS

NPG was developed using the Government's User Interface Specifications for GCCS, Version 1.0 (draft) October 1994, as a guide for the Graphical User Interface. It provides specifications concerning the "look and feel" of user interfaces built for use in the GCCS environment. Since this user interface specification is based on the Motif Style Guide, Release 1.2, and since the Gain Momentum development environment supplies screen borders, toolbars, widgets, and other objects that have a Motif "look and feel", NPG applications are, therefore, in compliance with many of the user interface specifications.

The classification on each screen reflects the classification of the OPLAN that the user specified in session defaults. The user cannot manually change screen classifications, but may assign a new classification to printed reports; otherwise, the printed report classification will be the same as the classification on the screen from which the report was run.

Every screen that contains areas for users to input data contains context-sensitive help. When the user places the cursor into the text box and clicks on the mouse, a help message appears at the bottom of the screen. Help is also available through the main menu. The help text accessed in this manner is excerpts from the NPG User's Manual.

Although the default selection device referred to throughout this manual is the mouse, the keyboard can also be used to select fields on the screen, i.e., tabbing between text boxes on a screen or using the up and down arrows to scroll through list boxes and highlight selectable items. However, buttons, sliders, and other widgets that require a "pressing" or "dragging" action will require a mouse.

Any screen can be closed through its menu bar by selecting **File, Close**, but exiting NPG may only be done on the Session Defaults screen. Simply close out the screen(s) that are open until you are at Session Defaults. Then select **File, Exit** to terminate the application.

SECTION 2 - REFERENCED DOCUMENTS

The documents listed below were referenced when preparing this manual. Should a conflict occur between these documents and the contents of the NPG Users' Manual, the users' manual shall take precedence.

2.1 SPECIFICATIONS

- *Individual Manpower Requirements and Availability System (IMRAS) Preliminary Software Requirements Specification.* Systems Research and Applications Corporation, Arlington, VA, October 1992.
- *User Interface Specifications for the Global Command and Control System (GCCS).* Navy Command Control and Ocean Surveillance Center Research, Development, Test & Evaluation Division (NRaD), San Diego, CA, October 1994.
- *Defense Information Systems Organization Database Specification 143-94,* 16 August 1994.

2.2 OTHER PUBLICATIONS

- *MEPES Core Users Manual.* SRA Corporation, Arlington, VA, July 1994.
- *MEPES Core Technical Manual.* SRA Corporation, Arlington, VA, July 1994.
- *JOPS III Non-Unit Personnel Generator (NPG) Users Manual,* JDSSC, 13 January 1989.
- *Software Development Plan.* SRA Corporation, Arlington, VA, 9 February 1996.
- *The Joint Staff Officers Guide 1993,* AFCS Pub 1, Armed Forces Staff College, Norfolk, VA, 1993.

SECTION 3 - SYSTEM OPERATION

The use of NPG is governed by deliberate support planning requirements. The purpose of support planning is to identify the quantities of replacement personnel required to sustain the forces identified during the Force planning phase of OPLAN development, and to phase their movement into theater to support the concept of operations. Support planning determines the quantities of replacement personnel in broad categories and converts them into phased movements that become deployment movement requirements. Support planning is complete when the supported Commander has determined and consolidated all significant personnel requirements, created a TPFDD file that contains these requirements, then merges the file into an OPLAN on the GCCS Core Database.

The actual support calculations use rates developed and maintained by the services, whose responsibility it is to supply, equip, and maintain the forces assigned to combatant commanders. The component commanders generally make these calculations by referring to service and United States Southern Command (USSOCOM) planning guidelines and doctrine. The supported commander can also perform calculations using component supplied planning factors.

NPG calculates two types of non-unit personnel requirements: Replacement and Filler. Automated generation of TPFDD records is only supported for replacement requirements, however. Replacement personnel are those individuals required to replace a stated percentage of the losses from all causes of the units in the theater. The percentage of personnel to be replaced is specified by the MEPES user in the MWF. Filler personnel are individuals of suitable grade and skill initially required to bring a unit to its authorized strength.

3.1 INSTALLATION AND SETUP

There are no NPG installation considerations for the user. NPG is installed on the server and permissions are set up by a systems administrator. The NPG Maintenance Manual discusses NPG installation in detail.

3.2 ACCESS CONTROL

Site Database Administrators must grant new NPG users access to both the MEPES and GCCS Core Databases. Once done, the GCCS system will assign the appropriate privileges to NPG users who log into GCCS. Those users will then be able to run the NPG application without providing additional login data to the system.

3.3 INITIATING A SESSION

When the user logs into GCCS, a screen containing the NPG icon will appear. The user accesses NPG by clicking on this icon, which will begin an NPG session by presenting the NPG Session Defaults screen.

3.4 STOPPING AND SUSPENDING WORK

To stop work, simply close each screen and exit NPG from the Session Defaults screen by selecting **File, Exit**, from the menu bar. However, since NPG functions and any resultant queries to the database are not complicated, NPG neither saves queries nor suspends a session for later recall.

3.5 CAPABILITIES

NPG allows users to generate non-unit personnel requirements by constructing TPFDD files containing non-unit personnel records called PINs. The purpose of creating TPFDD files is to incorporate them into OPLANs as the basis for lift allocation. To build these files, users will need specific capabilities that NPG can provide, such as:

- Displaying both personnel replacement and filler requirements
- Adding, modifying and deleting Personnel Working Files (PWFs)
- Generating Non-unit TPFDDs
- Incorporating the TPFDDs in GCCS Core OPLANs
- Retrieving, adding, modifying, and deleting Non-unit personnel TPFDD data.

The remainder of Section 3 discusses each of these capabilities in detail.

3.6 PROCESSING PROCEDURES

3.6.1 Session Defaults

Session Defaults is the first screen that NPG displays. The user must enter all fields on this screen; otherwise, the application will not proceed further. The Session Defaults include the Service, OPLAN, Start Day, and Stop Day. Figure 3-1 is an example of the Session Defaults opening screen.

Session Defaults

File NPG Help

UNCLASSIFIED

Service:

Plan: ▾

Time Period:

Start Day:

Stop Day:

UNCLASSIFIED

Figure 3-1: Session Defaults Screen.

The following procedure describes how to set up Session Defaults.

- Click on the Service button to display choices of Army, Navy, Air Force, and Marines, then click on one of the services to select it.
- After selecting the Service, click on the arrow next to the PLAN text box to display a list containing all valid OPLANs that exist on the MEPES Database for the service previously selected. Click on one of the OPLANs to select it.
- Next, click in the Start Day text box and enter an integer whose value is between 0 and 180 inclusive. The start day must be less than or equal to the stop day.
- Finally, click on the Stop Day text box and again enter an integer whose value is between 0 and 180 inclusive. The stop day must be greater than or equal to the start day.

Once all entries have been made, you are free to navigate to the NPG functions through the menu bar at the top of the screen. Most of the subsequent NPG calculations, queries, reports, etc., will be for the service, OPLAN, and time period selected on this screen. To specify a new OPLAN, service, or start and stop days, you must return to the Session Defaults screen and enter the new choices. Figure 3-2 depicts a completed Session Defaults screen.

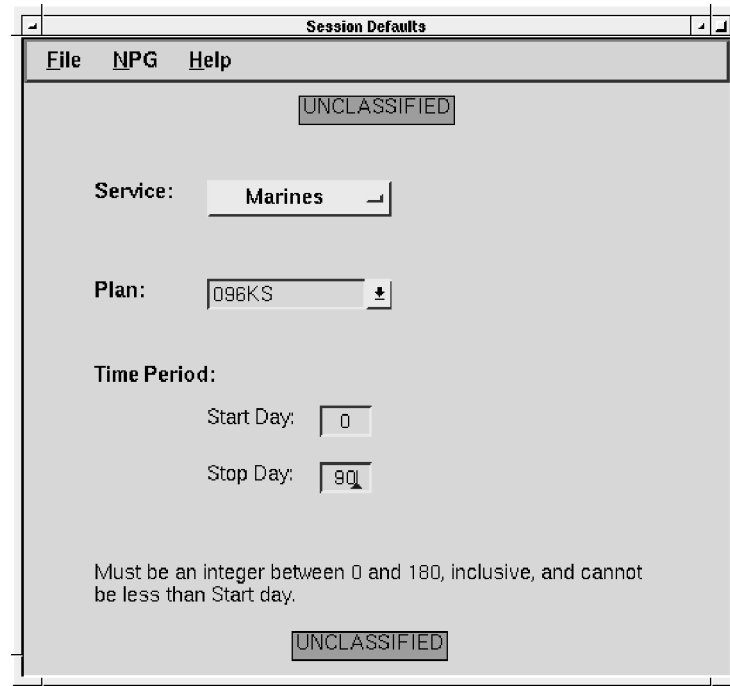


Figure 3-2: Completed Session Defaults Screen.

3.6.2 Requirements Analysis

The next two subsections explain how to use the NPG Replacement and Filler Requirements Analysis functions.

3.6.2.1 Filler Requirements. Filler Requirements is the sum of the differences between wartime required strength and currently authorized strength for all units whose destination is a specified country code. The formula for calculating Filler Requirements is:

For a given OPLAN, Service, and Deployment Operation Commencement Day (C-Day) range (all previously selected on the Session Defaults screen),

Filler Requirements_{Country_Code} =

$$\sum_{i=1}^{i=\text{max_units}} \text{Filler Requirements}_i = \text{Wartime Required}_i - \text{Currently Authorized}_i$$

where: **i** = a unit within the specified country

country_code = is the country code of the destination

The following procedure illustrates how to perform the Filler Requirements function:

- Navigate from the Session Defaults screen to the Filler Requirements screen by selecting **NPG, Filler Requirements** shown in Figure 3-3. NPG will display the Filler Requirements opening screen shown in Figure 3-4.

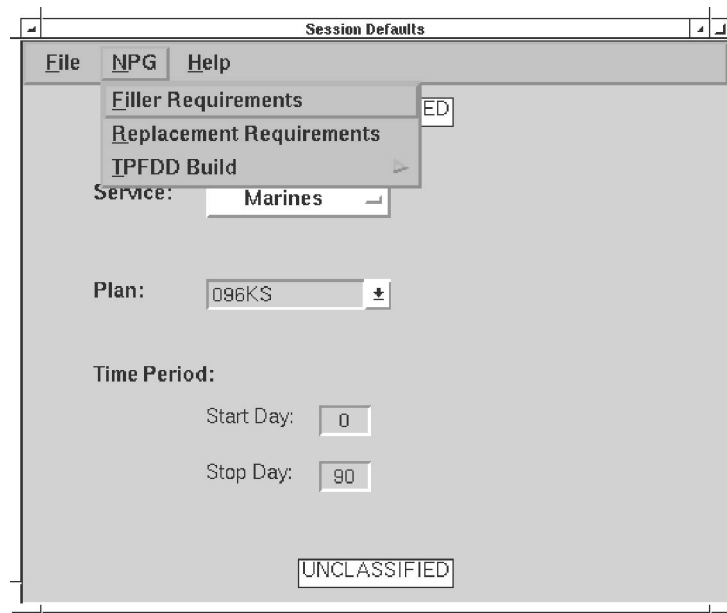


Figure 3-3: Filler Requirements Menu Selection.

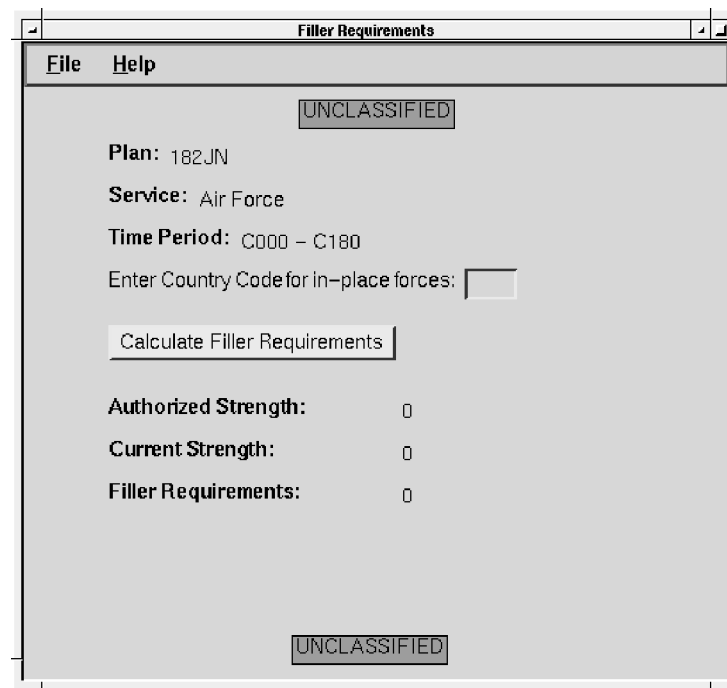


Figure 3-4: Filler Requirements Opening Screen.

- On the Filler Requirements screen, click in the text box provided and enter the two-character country code. (If you do not know the country code, an option is to hit the Esc button to activate the Geolocation Search Tool discussed in Paragraph 3.6.7 of this manual.)
- Click on the Calculate Difference button.

NPG will display the wartime required, current authorized, and difference between the two requirements shown in Figure 3-5.

The screenshot shows a window titled "Filler Requirements". It has a menu bar with "File" and "Help". Below the menu bar is a "UNCLASSIFIED" label. The main area contains the following text and fields:

- Plan:** 182JN
- Service:** Air Force
- Time Period:** C000 - C180
- Enter Country Code for in-place forces:** [sal]
- Calculate Filler Requirements** (button)
- Authorized Strength:** 17156
- Current Strength:** 16895
- Filler Requirements:** 261

Below these values is a text box stating: "Filler Requirements is the difference between Authorized Strength and Current Strength." At the bottom of the window is another "UNCLASSIFIED" label.

Figure 3-5: Filler Requirements.

3.6.2.2 Replacement Requirements. NPG calculates the number of replacement personnel required within a specified OPZONE. It calculates replacement requirements for each 10-day period and for each mission type: either combat or support. NPG uses a MEPES MWF as the source of personnel attrition rates and calculates the replacement requirements according to the following formula:

For a given OPLAN ID, Service, and C-Day range (all previously selected on the Session Defaults screen),

Replacement Requirements =

$$\text{Replacement Rate} * (\text{KIA} + \text{MIA} + \text{Adm} + \text{Evac} + \text{DIH} + \text{Cap} + \text{Unc})$$

where a percentage of the following categories are being replaced:

- Killed in Action (KIA)
- Missing in Action (MIA)
- Administrative Losses (Adm)
- Evacuees (Evac)
- Died in Hospital (DIH)
- Captured (Cap)
- Unconventional Warfare Losses (Unc).

The medical planner specifies the Replacement Rate.

Use the following procedure to perform the Replacement Requirements function.

- Navigate from the Session Defaults screen to the Replacement Requirements screen by selecting **NPG, Replacement Requirements** shown in Figure 3-6. An example of the replacement requirements opening screen is shown in Figure 3-7.

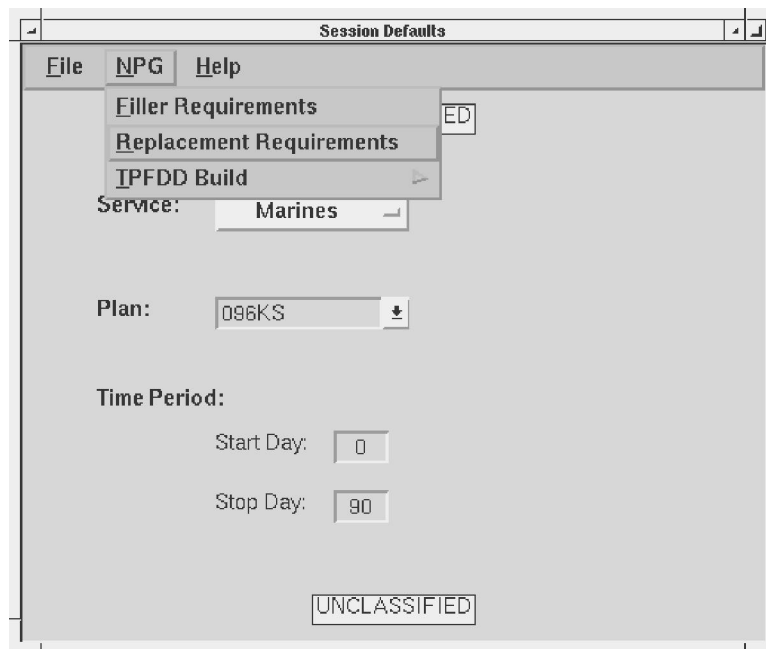


Figure 3-6: Replacement Requirements Menu Selection.

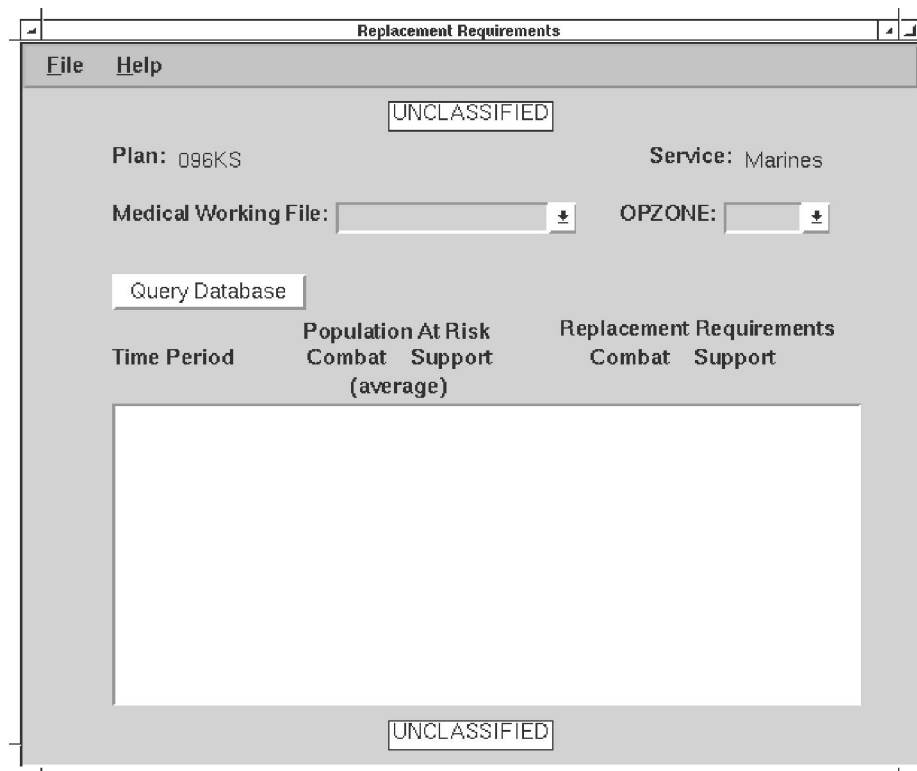


Figure 3-7: Replacement Requirements Opening Screen.